



## Centre for Health Effects of Radiological and Chemical Agents

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## British Nuclear Weapons Testing

In the 1950s and 1960s, approximately 21,000 members of the British Armed Services participated in the atmospheric testing of nuclear weapons, at various locations in Australia and the Pacific Ocean. There were also minor trials, which involved testing the performance of components and the safety of nuclear devices.



## The Australian Tests

The UK detonated 12 atomic devices of varying size (yield, given in equivalent kilotons of TNT) in the Montebello Islands, Emu Field and Maralinga (Table 1).

**Table 1.** UK Atmospheric Nuclear Tests in Australia.

Test	Date (GMT)	Location	Yield (kt TNT)
Hurricane	3rd October, 1952	Montebello Island	25
Totem 1	14th October, 1953	Emu Field	10
Totem 2	26th October, 1953	Emu Field	8
Mosaic 1	16th May, 1956	Montebello Islands	15
Mosaic 2	19th June, 1956	Montebello Islands	60
Buffalo 1	27th September, 1956	Maralinga	15
Buffalo 2	4th October, 1956	Maralinga	1.5
Buffalo 3	11th October, 1956	Maralinga	3
Buffalo 4	21st October, 1956	Maralinga	10
Antler 1	14th September, 1957	Maralinga	1
Antler 2	25th September, 1957	Maralinga	6
Antler 3	9th October, 1957	Maralinga	25

The UK performed approximately 600 minor trials as part of five military operations (Table 2). These trials did not involve atmospheric nuclear tests, however, some radioactive material was dispersed into the environment.

**Table 2.** UK Minor Trials in Australia.

Trial	Date (GMT)	Location
Kittens	September, 1953 – May, 1961	Emu Field and Maralinga

Trial	Date (GMT)	Location
Tims	July, 1955 – April, 1963	Maralinga
Rats	April, 1958 – November, 1960	Maralinga
Vixen A	June, 1959 – April, 1960	Maralinga
Vixen B	September, 1960 – April, 1963	Maralinga

## The Pacific Tests

The UK conducted the series of Grapple atmospheric nuclear tests in the vicinity of Malden Island and Christmas Island (modern day Kiribati) which are part of the Line Islands in the South Pacific (Table 3).

**Table 3.** UK Atmospheric Nuclear Tests in the Pacific

Test	Date (GMT)	Location	Yield (kt TNT)
Grapple 1	15th May, 1957	Near Malden Island	300
Grapple 2	31st May, 1957	Near Malden Island	720
Grapple 3	19th June, 1957	Near Malden Island	200
Grapple X	8th November, 1957	Near Christmas Island	1800
Grapple Y	28th April, 1958	Near Christmas Island	3000
Grapple Z1	22nd August, 1958	Near Christmas Island	24
Grapple Z2	2nd September, 1958	Near Christmas Island	1000

Test	Date (GMT)	Location	Yield (kt TNT)
Grapple Z3	11th September, 1958	Near Christmas Island	800
Grapple Z4	23rd September, 1958	Near Christmas Island	25

## Operation Dominic

In 1962, the USA conducted a series of atmospheric nuclear tests near Christmas Island, Johnstone Island and at other locations in the Pacific, codenamed Operation Dominic. Approximately, 300 members of the UK Armed Services supported the tests near Christmas Island, which were codenamed, Operation Brigadoon by the UK Government (Table 4).

**Table 4.** Operation Dominic Tests near Christmas Island

Test	Date (GMT)	Yield (kt TNT)
Adobe	25th April, 1962	190
Aztec	27th April, 1962	410
Arkansas	27th April, 1962	1090
Questa	2nd May, 1962	670
Yukon	8th May, 1962	100
Mesilla	9th May, 1962	100
Muskegon	11th May, 1962	50
Encino	12th May, 1962	500

Test	Date (GMT)	Yield (kt TNT)
Swanee	14th May 1962	97
Chetco	19th May, 1962	73
Tanana	25th May, 1962	2.6
Nambe	27th May, 1962	43
Alma	8th June, 1962	782
Truckee	9th June, 1962	210
Yeso	10th June, 1962	3000
Harlem	12th June, 1962	1200
Rinconada	15th June, 1962	800
Dulce	17th June, 1962	52
Petit	19th June, 1962	2.2
Otowi	22nd June, 1962	81.5
Bighorn	27th June, 1962	7650
Bluestone	30th June, 1962	1270
Sunset	10th July, 1962	1000
Pamlico	11th July, 1962	3880

There were an additional seven nuclear tests in Operation Dominic that did not involve UK personnel: Frigate Bird, Swordfish, Androscoggin, Bumping, Chama, Calamity and Housatonic.



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